

**IN THE CLAIMS:**

Claims 1 and 21 have been amended herein. All of the pending Claims 1 through 21 are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

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1. (currently amended) A method of treating inflammatory bowel disease in a mammal, said method comprising:

administering a medicament to a mammal with inflammatory bowel disease comprising an amount of a cytokine- or cytokine antagonist-producing genetically modified non-invasive Gram-positive bacterial strain, wherein the administration of said medicament results in reduction of intestinal mucosal inflammation by at least 50%,

wherein said cytokine or cytokine-antagonist is selected from the group consisting of IL-10, a soluble TNF receptor, a TNF antagonist, an IL-12 derived homodimer, and EBV BCRF1.

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2. (cancelled)

3. (previously amended) The method according to claim 1 wherein the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

4. (original) The method according to claim 3 wherein the *Lactococcus* species is *Lactococcus lactis*.

5. (cancelled)

6. (previously amended) The method according to claim 1 wherein the bowel disease is Crohn's Disease.

7. (original) The method according to claim 1 wherein the medicament is administered in combination with at least one additional therapeutic agent.

8. (previously amended) The method according to claim 7 wherein the at least one therapeutic agent includes at least one immunosuppressive drug.

9. (previously amended) The method according to claim 7 wherein the co-administration of at least one additional therapeutic agent is sequential or simultaneous.

10. (previously amended) The method according to claim 1 wherein the medicament is delivered through *in situ* synthesis by recombinant *Lactococcus lactis*.

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11. (previously amended) The method according to claim 1, wherein the cytokine is IL-10 and the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

12. (original) The method according to claim 11 wherein the *Lactococcus* species is *Lactococcus lactis*.

13. (cancelled)

14. (previously amended) The method according to claim 11, wherein the bowel disease is Crohn's Disease.

15. (previously amended) The method according to claim 11 wherein the medicament is administered in combination with at least one additional therapeutic agent.

16. (previously amended) The method according to claim 15 wherein the at least one therapeutic agent includes at least one immunosuppressive drug.

17. (previously amended) The method according to claim 15 wherein the co-administration of at least one additional therapeutic agent is sequential or simultaneous.

18. (currently amended) The method according to claim 2 21 wherein the medicament is delivered through *in situ* synthesis by recombinant *Lactococcus lactis*.

19. (cancelled)

20. (cancelled)

21. (currently amended) A method of preventing inflammatory bowel disease in a mammal, said method comprising:

administering a medicament to a mammal susceptible to inflammatory bowel

disease comprising an amount of a cytokine- or cytokine-antagonist-producing genetically modified non-invasive Gram-positive bacterial strain, wherein the administration of said medicament results in prevention of intestinal mucosal inflammation, and

wherein said cytokine or cytokine-antagonist is selected from the group consisting of IL-10, a soluble TNF receptor, a TNF antagonist, an IL-12 derived homodimer, and EBV BCRF1.

22. (new) The method according to claim 21, wherein the cytokine is IL-10 and the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

23. (new) The method according to claim 21 wherein the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

24. (new) The method according to claim 23 wherein the *Lactococcus* species is *Lactococcus lactis*.

25. (new) A method of preventing Crohn's Disease and ulcerative colitis in a mammal, said method comprising:

administering a medicament to a mammal susceptible to Crohn's Disease or ulcerative colitis comprising an amount of a cytokine- or cytokine-antagonist-producing genetically modified non-invasive Gram-positive bacterial strain, wherein the administration of said medicament results in prevention of intestinal mucosal inflammation, and wherein said cytokine or cytokine-antagonist is selected from the group consisting of IL-10, a soluble TNF receptor, a TNF antagonist, an IL-12 derived homodimer, and EBV BCRF1.

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26. (new) The method according to claim 25, wherein the cytokine is IL-10 and the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

27. (new) The method according to claim 25 wherein the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

28. (new) The method according to claim 27 wherein the *Lactococcus* species is *Lactococcus lactis*.

29. (new) A method of preventing ulcerative colitis in a mammal, said method comprising:

administering a medicament to a mammal susceptible to ulcerative colitis comprising an amount of a cytokine- or cytokine-antagonist-producing genetically modified non-invasive Gram-positive bacterial strain, wherein the administration of said medicament results in prevention of intestinal mucosal inflammation, and wherein said cytokine or cytokine-antagonist is selected from the group consisting

of IL-10, a soluble TNF receptor, a TNF antagonist, an IL-12 derived homodimer, and EBV BCRF1.

30. (new) The method according to claim 29, wherein the cytokine is IL-10 and the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

31. (new) The method according to claim 29 wherein the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

32. (new) The method according to claim 31 wherein the *Lactococcus* species is *Lactococcus lactis*.

33. (new) A method of preventing Crohn's Disease in a mammal, said method comprising:

administering a medicament to a mammal susceptible to Crohn's Disease

comprising an amount of a cytokine- or cytokine-antagonist-producing genetically modified non-invasive Gram-positive bacterial strain, wherein the administration of said medicament results in prevention of intestinal mucosal inflammation, and

wherein said cytokine or cytokine-antagonist is selected from the group consisting of IL-10, a soluble TNF receptor, a TNF antagonist, an IL-12 derived homodimer, and EBV BCRF1.

34. (new) The method according to claim 33, wherein the cytokine is IL-10 and the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

35. (new) The method according to claim 33 wherein the non-invasive Gram-positive bacterial strain is a *Lactococcus* species.

C<sup>2</sup> 36. (new) The method according to claim 35 wherein the *Lactococcus* species is  
*Lactococcus lactis*.

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